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Team 8: Data Farming in Support of NATO

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SUMMARY

The NATO Modeling and Simulation Group has approved an exploratory team to examine the veracity of forming a task group to examine data farming in support of NATO. This exploratory team, called ET-029, continued its activity at IDFW 19, convening focus groups to further this examination.

Given the following basic points, at the NATO Modeling and Simulation Group meeting in October the exploratory team received support from 10 nations for consideration as a task group,.

- The nature of scenarios that NATO forces are faced with in today's world are uncertain and complex.
- Data farming combines rapid prototyping of agent-based and other models with the exploratory power of advanced computing to rapidly generate insight into questions.
- Data farming allows the decision maker to more fully understand the landscape of possibilities and also allows for the discovery of outliers.
- Six realms of data farming are model development, high performance computing, visualization of large simulation data output, rapid prototyping of scenarios, parameter space exploration through efficient design of experiments, and collaborative processes.

This task group, pending final approval, will be called MSG-088 and will hold its first official meeting in May 2010 in Paris. Here at IDFW 19, possible support areas of work were discussed, including hardware, overview of models, example scenarios, efficient designs, visualization, analysis tools, evolutionary algorithms, effects based planning, and decision support. Application areas thought to be worthwhile include winning hearts and minds and the cascading consequences of actions in that area, command and control and the interface challenges of the multi-national forces of NATO, peace support operations, urban operations, anti-piracy operations, training, and defeating improvised explosive devices.

Team 8 concluded with plans to contribute to further discussions of potential MSG-088 efforts. These plans include another ET-029 meeting to be held following IDFW 20 on Friday 26 March 2010 in Monterey, California, USA. Please contact gehorne@nps.edu if you are interested in participating.